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| MARTINE PENILLA & GENCARELLA, LLP 710 LAKEWAY DRIVE SUITE 200 SUNNYVALE, CA 94085 | | | EXAMINER NEGRON, WANDA M | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/752,381

Applicant(s)

IMAI ET AL.

Examiner

Wanda M. Negrón

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims 13-15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 13-15 define a computer program product embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and

functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed "computer program product" can range from paper on which the program is written, to a program simply contemplated and memorized by a person.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4 and 6 recite the limitation "the image processing conditions". There is insufficient antecedent basis for this limitation in the claim. For examining purposes, claims 4 and 6 will be treated as reciting "the quality adjustment parameters" instead of "the image processing conditions".

Any claim not specifically addressed, above, is being rejected as incorporating the deficiencies of a claim upon which it depends.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over
Shiota et al. (6,011,547).

Regarding **claim 1**, Shiota discloses an image processing method for executing image processing of image data, i.e. a method for reproducing images using "an optimal image processing condition" (see col. 1, lines 64-67), said method comprising acquiring shooting information that indicates shooting conditions at the time of shooting, i.e. acquiring information which varies with the photo-taking environment (see col. 2, lines 19-30), said information describing a plurality of shooting condition parameters, i.e. parameters which specify the shooting conditions at the time the image is captured, such as focusing length, color temperature, use of flash, etc. (see col. 2, lines 18-26); acquiring image processing control information that designates a plurality of picture quality adjustment parameters to be used during image processing, i.e. acquiring processing conditions for enhancing a picture quality by selecting an optimal look-up table (see col. 2, lines 49-65), said information describing a plurality of specifying parameters, i.e. parameters associated with a mode setting (see col. 4, lines 31-53); setting said plurality of picture quality adjustment parameters on the basis of either of said plurality of specifying parameters and of said shooting condition parameters, i.e. setting the enhancing parameters on the basis of a processing condition or the recorded shooting conditions when the image was captured (see col. 5, lines 54-59); and

executing image processing of said image data using said set picture quality adjustment parameters (see col. 5, lines 54-59).

Shiota, however, does not explicitly disclose setting said plurality of picture quality adjustment parameters on the basis of said plurality of specifying parameters, while for any of said plurality of picture quality adjustment parameters that is not set by means of said specifying parameters, setting these said picture quality adjustment parameters on the basis of said shooting condition parameters.

Those ordinarily skilled artisans in the relevant art will recognize that prioritizing and selecting from two well-known sets of parameters for image enhancement is within the level of ordinary skill in the art. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to prioritize the parameter selection for image enhancement since a person with ordinary skill has good reason to pursue the known options within his or her technical grasp if this leads to an anticipated result.

Regarding **claim 2**, Shiota discloses that said plurality of specifying parameters include parameters that make up particular combinations of specifying parameters appropriate to particular shooting scenes, i.e. mode settings comprising sun set mode, portrait mode, etc. (see col. 4, lines 34-53), for designating image processing depending on the shooting scene; and wherein said shooting condition parameters include scene-specific shooting condition parameters describing a particular shooting scene set at the

time of shooting, i.e. acquiring information which varies with the photo-taking environment (see col. 2, lines 19-30).

Regarding **claims 3/1 and 3/2**, Official notice is taken that the concept of adjusting picture quality by analyzing the image data and correcting said data on the basis of a set of predetermined parameters is well-known in the art. It would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the captured image data on the basis of a predetermined set of parameters because an enhanced image can be achieved.

Regarding **claims 4**, Shiota discloses an image processing method for executing image processing of image data, i.e. a method for reproducing images using "an optimal image processing condition" (see col. 1, lines 64-67), that has been associated with at least one set of information selected from shooting information indicating shooting conditions at the time of shooting, and image processing control information designating a plurality of picture quality adjustment parameters to be used during image processing (see col.3, lines 16-20), said method comprising: searching, from among the quality adjustment parameters associated with said image data, for a scene-specific shooting condition parameter depending on a particular shooting scene, i.e. searching for conditions of the image processing in order to enhance the picture (see col. 3, lines 9-20); in the event that said scene-specific shooting condition parameter is not found, searching, from among the shooting conditions associated with said image data, for a

shooting scene condition, i.e. searching for the recording information in order to enhance the picture (see col. 3, lines 9-20 and col. 5, lines 49-57), and executing image processing of said image data using said acquired conditions (see col. 3, lines 9-20 and col. 5, lines 49-57). Shiota, however, does not explicitly disclose searching, from among the image processing conditions associated with said image data, for an arbitrary image processing designating condition that arbitrarily designates an image processing condition; in the event that a said arbitrary image processing designating condition is not found, searching, from among the shooting conditions associated with said image data, for an arbitrarily set shooting condition.

Those ordinarily skilled artisans in the relevant art will recognize that an image can be enhanced for use with different reproducing apparatus. Selecting a second set of parameters, i.e. a set of arbitrary parameters, in order to enhance the image on the basis of a second reproducing apparatus is well-known in the art, as evidenced by Shiota (see figure 1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to search, from among the image processing conditions associated with said image data, for *an arbitrary image processing designating condition* that arbitrarily designates an image processing condition, and in the event that a said arbitrary image processing designating condition is not found, searching, from among the shooting conditions associated with said image data, for an arbitrarily set shooting condition, because a second set of enhancement parameters can be obtained in order to enhance the image for at least two different image reproducing devices.

In addition, it would have been inherent to acquire image data in order to perform image processing on said image data.

Regarding **claim 5**, Official notice is taken that the concept of adjusting picture quality by analyzing the image data and correcting said data on the basis of a set of predetermined parameters is well-known in the art. It would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the captured image data on the basis of a predetermined set of parameters because an enhanced image can be achieved.

Claims 6 and 7 have limitations similar to those treated in the above rejection of claims 4 and 5, and are met by the references as discussed above, with the exception of modifying the search order for acquiring a scene-specific shooting condition and an arbitrary shooting condition. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modifying the search order for acquiring a scene-specific shooting condition and an arbitrary shooting condition since a person with ordinary skill has good reason to pursue the known options within his or her technical grasp if this leads to an anticipated result.

Claim 8 has limitations similar to those treated in the above rejection of claim 4, and are met by the references as discussed above

Apparatus **claims 9-12** are drawn to the apparatus corresponding to the method of using same as claimed in claims 1, 4, 6 and 8, respectively. Therefore apparatus claims 9-12 correspond to method claims 1, 4, 6 and 8, and are rejected for the same reasons of anticipation (obviousness) as used above.

Claims 13-15 are drawn to a computer program product corresponding to the method claimed in claims 1, 4 and 6, respectively. Therefore claims 13-15 correspond to method claims 1, 4 and 6, and are rejected for the same reasons of anticipation (obviousness) as used above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Nakami (US 2004/0141069 A1) discloses an image processing method that uses either a shooting condition or image processing control information for image enhancement purposes.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wanda M. Negrón whose telephone number is (571) 270-1129. The examiner can normally be reached on Mon-Fri 6:30 am - 4:00 pm alternate Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Wanda M. Negrón/

Examiner, Art Unit 2622
January 7, 2008

A handwritten signature in black ink, appearing to read 'David Ometz', with a long horizontal stroke extending to the right.

DAVID OMETZ
SUPERVISORY PATENT EXAMINER